



INTERNATIONAL APPLICATION PUBLISHED UNDER-THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6: G01B 9/02

(11) International Publication Number:

LU, MC, NL, PT, SE).

WO 00/12960

(43) International Publication Date:

9 March 2000 (09.03.00)

(21) International Application Number:

PCT/US99/19601

(22) International Filing Date:

25 August 1999 (25.08.99)

(30) Priority Data:

60/097,989

26 August 1998 (26.08.98)

Published US

With international search report.

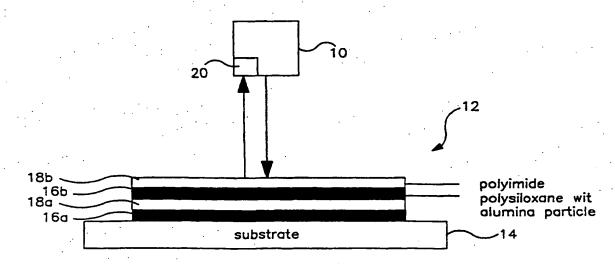
(81) Designated States: AU, CA, CN, JP, KR, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT,

(71) Applicant (for all designated States except US): THE BOARD OF GOVERNORS FOR HIGHER EDUCATION, STATE OF RHODE ISLAND AND PROVIDENCE PLANTA-TIONS [US/US]; 199 Promenade Street, Providence, RI 02908 (US).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): EULER, William, B. [US/US]; 35 Flintstone Road, Narragansett, RI 02882 (US). GREGORY, Otto, J. [US/US]; 87 Westwind Road, Wakefield, RI 02879 (US). HUSTON, Gregg, C. [US/US]; 29 Tomahawk Trail, Wakefield, RI 02879 (US).
- (74) Agents: STEVENS, Richard, L. et al.; Samuels, Gauthier & Stevens, Suite 3300, 225 Franklin Street, Boston, MA 02110 (US).

(54) Title: THIN FILM STRAIN SENSORS BASED ON INTERFEROMETRIC OPTICAL MEASUREMENTS



(57) Abstract.

The invention relates to polymeric/semiconductor thin film strain gauges comprising visible light from spectrometer (10) which is directed onto a thin film passive sensor (12) having a transparent glass substrate (14) and a laminated construction in succession from the substrate (14), of a polyimide layer (18a), a polysiloxane layer (16a) filled with alumina particles, a polyimide layer (18b) and a polysiloxane layer (16b) filled with alumina particles.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

	• • •			*			
AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	Fl	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	, LU	Luxembourg	SN	Senegal
ΑU	Australia	GA	Gabon	LV	Larvia .	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	- MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav	TM.	Turkmenistan
BF	Burkina Faso	GR	Greece		Republic of Macedonia	TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ .	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israei	MR	Mauritania	ÜĞ	Uganda
BY	Belarus	is	Iceland	MW	Malawi	US	United States of America
CA	Canada ·	IT	Italy	MX	Mexico .	UZ	Uzbekistan
CF	Central African Republic	JР	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
. CH	Switzerland	KG	Kyrgyzstan	NO	Norway	zw	Zimbabwe
CI .	Côte d'Ivoire	· KP	Democratic People's	NZ	New Zealand	211	Limbabwe
CM	Cameroon	•	Republic of Korea	PL	Poland		•
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ.	Kazakstan	RO	Romania		
CZ.	Czech Republic	LC	Saint Lucia	RU	Russian Federation		•
DE	Germany	LI	Liechtenstein	SD	Sudan		
. DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		
					• •		•